

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Boerke, et al. :
:
Serial No.: Not Yet Assigned :
: **GROUP:** Not Yet Assigned
Attny No.: 68,143-009 :
:
Filed : December 20, 2001 :
:
Title : METHOD OF TRACKING PROGRESS :
ON A TASK :

PRELIMINARY AMENDMENT

Honorable Commissioner for Patents
Washington, D.C. 20231

Dear Sir:

Prior to examination of the present application, please amend the application as follows:

IN THE SPECIFICATION

On page 4, delete paragraph 25 and replace with the following:

In a third process block 106, an actual number of subtasks completed by at least one worker in each time slot is tracked.

On page 5, delete paragraph 25 and replace with the following:

In a third process block 106, an actual number of subtasks completed by at least one worker in each time slot is tracked.

On page 5, delete paragraph 28 and replace with the following:

With specific reference to Fig. 4, the progress of the workers on the task is tracked on a writeable medium 400, shown as a "TRACKS Process Board". In one embodiment, the TRACKS Process Board or board 400 is posted nearby the workers. The board 400 may be a sheet of paper, a poster, or an erasable medium, such as a chalk board or a white board. The grid and other information (see below) are pre-printed on the board 400 (see below). The workers are encouraged to record their progress on the task on the Board 400. In one embodiment, the workers are required to record their progress on the task.

On page 10, delete paragraph 48 and replace with the following:

With reference to Fig. 2, a method 200 for tracking progress, by at least one worker, on a task over a predetermined period of time, according to another embodiment of the present invention will now be described. The task includes a plurality of subtask or tracks. In a seventh process block 202, the predetermined period of time is divided into a plurality of timeslots. In an eighth process block 204, a target number of subtasks to be completed during each timeslot is determined. In a ninth process block 206, an actual number of subtasks completed by at least one worker in each time slot is tracked. A variance between the actual number of subtasks completed and the target number is recorded for each time slot in a tenth process block 208.

On page 10, delete paragraph 49 and replace with the following:

In an eleventh process block 210, an accumulated variance in each time slot is recorded.

On page 13, after paragraph 108 and replace with the following new paragraphs 108.1 and 108.2:

In one embodiment of the present invention, a method of tracking progress by at least one work, on a task over a period of time, the tasks including a plurality of subtasks, includes the steps of dividing the period of time into a plurality of timeslots, determining a target number of subtasks to be completed during each time slot, tracking an actual number of subtasks completed by the at least one worker in each time slot, recording a variance between the actual number of subtasks completed and the target number associated with each time slot; and taking at least one action in response to the variance.

In one embodiment, the action taken includes filling out a variance card, as described above. In another embodiment, one or more variances are analyzed to help determine what action may need to be taken. For example, the analysis may indicate recurring problems which need to be addressed in order to increase efficiency. For example, in one embodiment the pick path may be identified as causing delays in the parts being pulled. Therefore, a more efficient pick path may be determined to pick parts up. Alternatively, routing software may be incorporated to attempt to optimize the pick paths. In addition, if the pick path is causing delays, the analysis may reveal which parts are more efficiently grouped together. For example, perhaps parts are identified as commonly picked together. Then they may be located closely to

each other to increase the efficiency of the system. In addition, as illustrated in Figs. 5 and 6, if lack of training is identified as a repetitive problem then a process change may be to provide more training in identified areas. If heavy parts are a recurring problem, then a process change may include a better way to store, move heavy parts. In addition, heavy parts may be moved to a preferred height in the inventory bins in order to be easier to move etc. If tag problems are a recurring problem, then the process improvement may be to review tag labels and update any missing labels, or to identify a better way of placing tag labels so they are not lost.

IN THE CLAIMS

Please replace claim 48 with the following:

48. (Amended). A method for tracking progress, by at least one worker, on a task over a predetermined period of time, the task including a plurality of sub-subtasks, comprising:

- dividing the period of time into a plurality of timeslots;
- determining a target number of subtasks to be completed during each timeslot;
- tracking an actual number of subtasks completed by the at least one worker in each time slot;
- temporarily recording a variance between the actual number of subtasks completed and the target number associated with each time slot;
- temporarily recording an accumulated variance associated with each time slot;
- providing a variance card to the at least one worker;
- recording a reason on the variance card for a variance between the actual number of subtasks completed and the target number;
- recording a total variance for the predetermined period of time and the reason for the variance in a log; and,
- modifying the target number of subtasks to be completed during at least one time slot as a function of the total variance and the reason.

Please replace claim 50 with the following:

50. (Amended). A method, for tracking progress, by at least one worker, on a task over a period of time, the task including a plurality of subtasks, comprising;

- dividing the period of time into a plurality of timeslots;
- determining a target number of subtasks to be completed during each timeslot;
- tracking an actual number of subtasks completed by the at least one worker in each time slot;
- recording a variance between the actual number of subtasks completed and the target number associated with in each time slot;
- recording an accumulated variance associated with in each time slot; and,
- taking at least one action in response to the variance.

REMARKS/ARGUMENTS

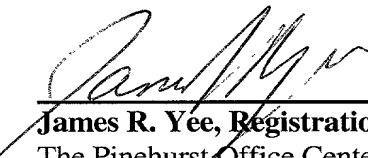
No new matter is added by this amendment. By this amendment, claims 48 and 50 are amended. The specification has been amended to correspond with the claims. Support for the amendments can be found in the specification, drawings and claims. Also attached is a copy of Figs. 1 and 2 with proposed drawings changes in red. New formal drawings sheets will be filed upon Examiner approval.

Attached hereto is a marked-up version of the changes made to the specification and claims by the current amendment. The attached page is captioned **"VERSION WITH MARKINGS TO SHOW CHANGES MADE."**

Respectfully submitted,

HOWARD & HOWARD ATTORNEYS, P.C.

December 20, 2001
Date

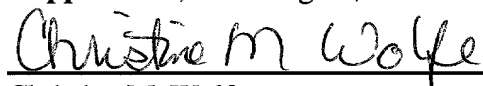


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Applicant : Boerke, et al.
Appl. No. : Not Yet Assigned
Attorney Docket No. 68,143-009
Page : 5 of 8

CERTIFICATE OF EXPRESS MAILING

I hereby certify that the enclosed **Preliminary Amendment** and fee is being deposited with the United States Postal Service as Express Mail, postage prepaid, in an envelope as "Express Mail Post Office to Addressee", Mailing Label No. **EL886510433US** and addressed to the Commissioner of Patents, **Box Patent Application**, Washington, D. C. 20231, on **December 20, 2001.**



Christine M. Wolfe

10027747-420001

VERSION WITH MARKS TO SHOW CHANGES MADE

IN THE SPECIFICATION

On page 4, delete paragraph 25 and replace with the following:

In a third process block 106, an actual number of subtasks completed by [each] at least one worker in each time slot is tracked.

On page 5, delete paragraph 25 and replace with the following:

In a third process block 106, an actual number of subtasks completed by [each] at least one worker in each time slot is tracked.

On page 5, delete paragraph 28 and replace with the following:

With specific reference to Fig. 4, the progress of the workers on the task is tracked on a writeable medium 400, shown as a "TRACKS Process Board". In one embodiment, the TRACKS Process Board or board 400 is posted nearby the workers. The board 400 may be a sheet of paper, a poster, or an erasable medium, such as a chalk board or a white board. The grid and other information (see below) are pre-printed on the board 400 (see below). The workers are encouraged to record their progress on the task on the Board 400. In one embodiment, the workers are [recorded] required to record their progress on the task.

On page 10, delete paragraph 48 and replace with the following:

With reference to Fig. 2, a method 200 for tracking progress, by at least one worker, on a task over a predetermined period of time, according to another embodiment of the present invention will now be described. The task includes a plurality of subtask or tracks. In a seventh process block 202, the predetermined period of time is divided into a plurality of timeslots. In an eighth process block 204, a target number of subtasks to be completed during each timeslot is determined. In a ninth process block 206, an actual number of subtasks completed by [each] at least one worker in each time slot is tracked. A variance between the actual number of subtasks completed and the target number is recorded for each time slot in a tenth process block [206] 208.

On page 10, delete paragraph 49 and replace with the following:

In an eleventh process block [208] 210, an accumulated variance in each time slot is recorded. [In a twelfth process block 210, a total variance for the predetermined period of time is recorded without reference to each worker].

On page 13, after paragraph 108 and replace with the following new paragraphs 108.1 and 108.2:

In one embodiment of the present invention, a method of tracking progress by at least one work, on a task over a period of time, the tasks including a plurality of subtasks, includes the steps of dividing the period of time into a plurality of timeslots, determining a target number of subtasks to be completed during each time slot, tracking an actual number of subtasks completed by the at least one worker in each time slot, recording a variance between the actual number of subtasks completed and the target number associated with each time slot; and taking at least one action in response to the variance.

In one embodiment, the action taken includes filling out a variance card, as described above. In another embodiment, one or more variances are analyzed to help determine what action may need to be taken. For example, the analysis may indicate recurring problems which need to be addressed in order to increase efficiency. For example, in one embodiment the pick path may be identified as causing delays in the parts being pulled. Therefore, a more efficient pick path may be determined to pick parts up. Alternatively, routing software may be incorporated to attempt to optimize the pick paths. In addition, if the pick path is causing delays, the analysis may reveal which parts are more efficiently grouped together. For example, perhaps parts are identified as commonly picked together. Then they may be located closely to each other to increase the efficiency of the system. In addition, as illustrated in Figs. 5 and 6, if lack of training is identified as a repetitive problem then a process change may be to provide more training in identified areas. If heavy parts are a recurring problem, then a process change may include a better way to store, move heavy parts. In addition, heavy parts may be moved to a preferred height in the inventory bins in order to be easier to move etc. If tag problems are a recurring problem, then the process improvement may be to review tag labels and update any missing labels, or to identify a better way of placing tag labels so they are not lost.

IN THE CLAIMS

Please replace claim 48 with the following:

48. (Amended). A method for tracking progress, by at least one worker, on a task over a predetermined period of time, the task including a plurality of sub-subtasks, comprising:

- dividing the period of time into a plurality of timeslots;
- determining a target number of subtasks to be completed during each timeslot;
- tracking an actual number of subtasks completed by the at least [oneworker] one worker in each time slot;
- temporarily recording a variance between the actual number of subtasks completed and the target number associated with each time slot;
- temporarily recording an accumulated variance associated with each time slot;
- providing a variance card to the at least one worker;
- recording a reason on the variance card for a variance between the actual number of subtasks completed and the target number;
- recording a total variance for the predetermined period of time and the reason for the variance in a log; and,
- modifying the target number of subtasks to be completed during at least one time slot as a function of the total variance and the reason.

Please replace claim 50 with the following:

50. (Amended). A method, for tracking progress, by at least one worker, on a task over a period of time, the task including a plurality of subtasks, comprising:

- dividing the period of time into a plurality of timeslots;
- determining a target number of subtasks to be completed during each timeslot;
- tracking an actual number of subtasks completed by the at least one [each] worker in each time slot;
- recording a variance between the actual number of subtasks completed and the target number associated with in each time slot;
- recording an accumulated variance associated with in each time slot; and,
- taking at least one action in response to the variance.

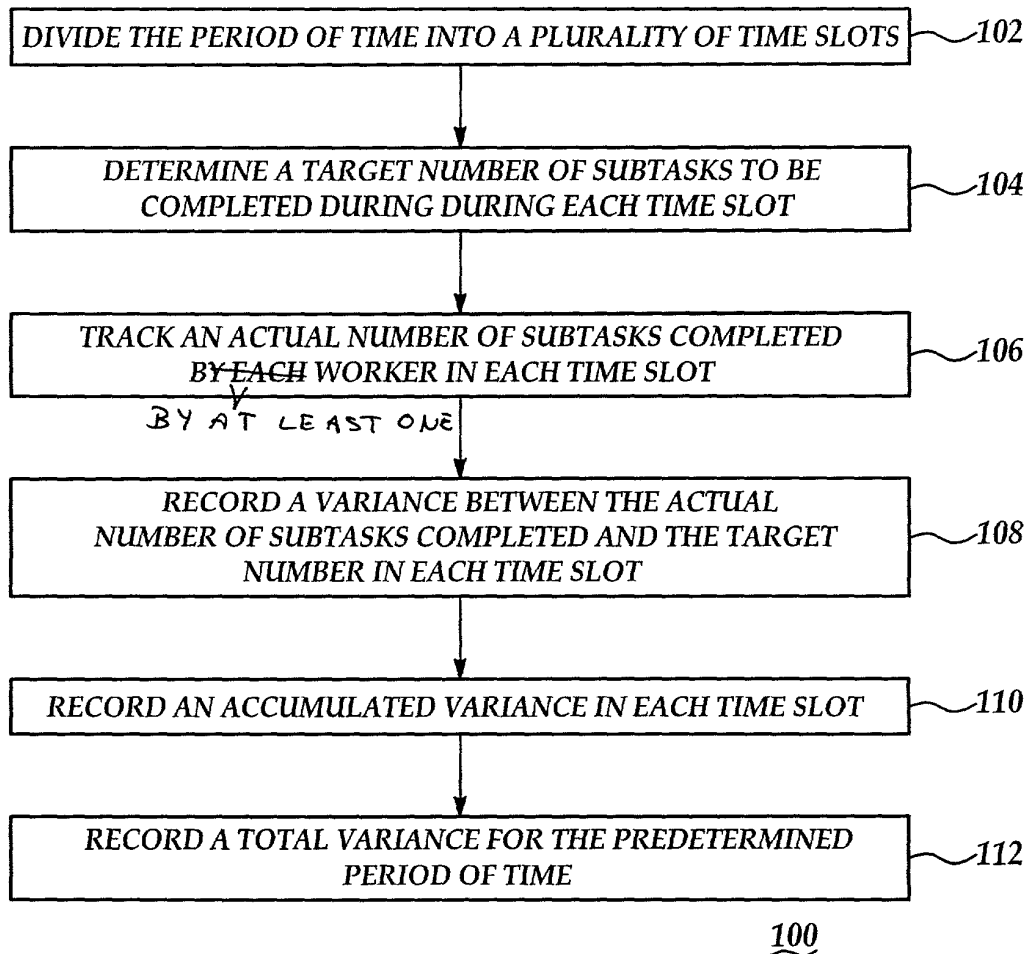


Figure 1

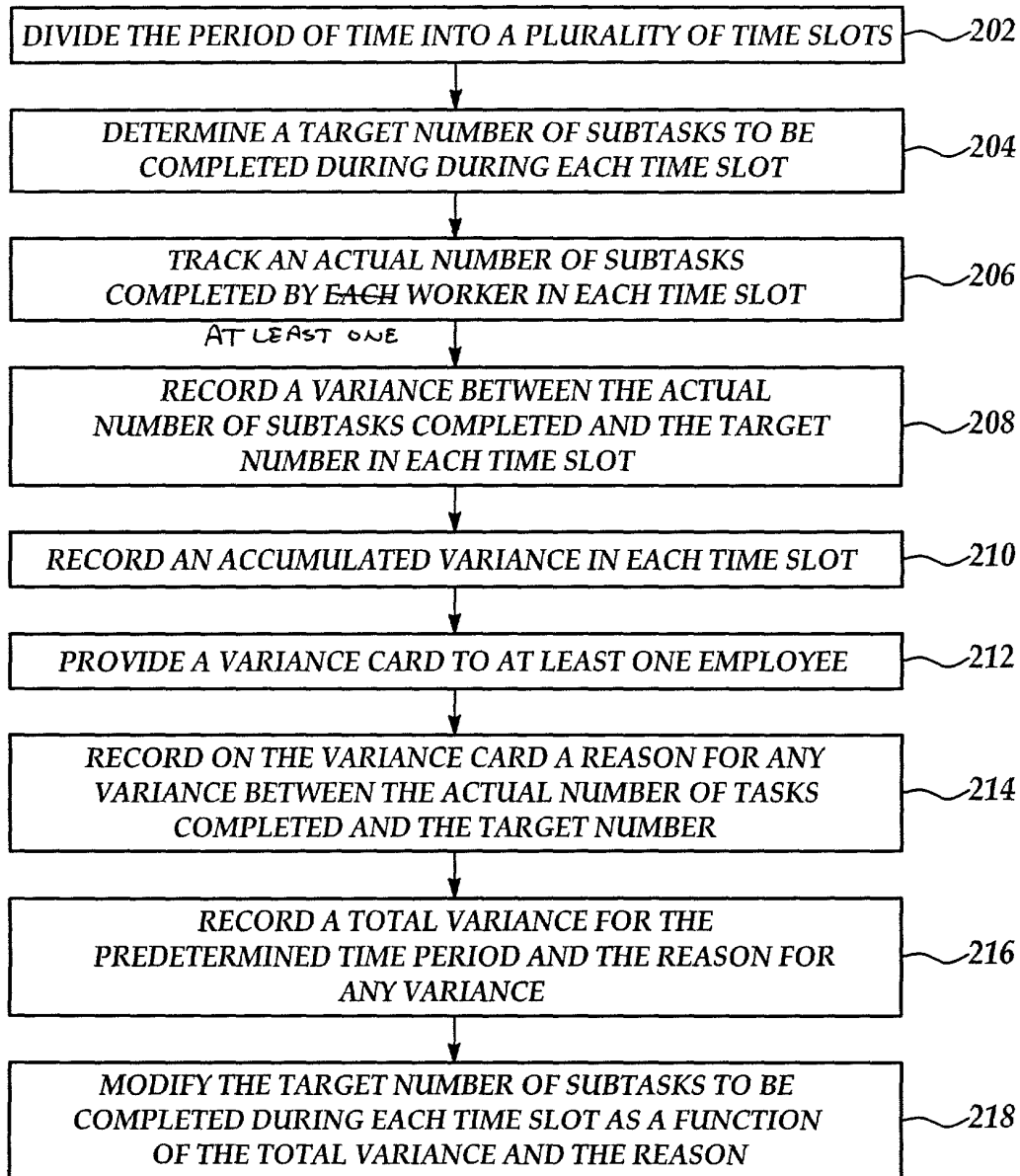


Figure 2